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SEQUENCE LISTING

<110> BIOPROTEIN TECHNOLOGIES

<120> PREPARATION OF RECOMBINANT ROTAVIRUS PROTEINS IN MILK OF TRANSGENIC NON-HUMAN MAMMALS

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<150> EP 04/290 589

<151> 2004-03-04

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&lt;210&gt; 6

&lt;211&gt; 2797

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; VP2 strain RF open reading frame, modified sequence

and with signal peptide

<400> 6  
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<210> 7

<211> 783

<212> DNA

<213> Porcine rotavirus

<220>

<223> VP4 gene for capsid protein, partial cds

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<211> 799  
<212> DNA  
<213> Human rotavirus

<220>  
<223> PlB VP4 gene, partial cds

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 taataaqatt taaatttgg 799

<210> 9  
<211> 875  
<212> DNA  
<213> Human rotavirus

<220>  
<223> P3 truncated VP4 protein gene, partial cds

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qctqaattcc atttgataacc gcaatcgcatgt gtacacaata tataaacaat	660

ggtttaccac caattcagaa tacaaggaat attgtaccag taaatattac atctagacag	120
attaaagaca taagagctca gatgaatgaa gacatagtga tatcaaaaac ttgcgtatgg	780
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<210> 10  
<211> 1194  
<212> DNA  
<213> rotavirus

<220>  
<223> VP6 strain RF open reading frame

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<210> 11  
<211> 1194  
<212> DNA  
<213> Artificial sequence

<220>  
<223> VP6 strain RF open reading frame, modified sequence

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&lt;210&gt; 12

&lt;211&gt; 1194

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; VP6 strain RF open reading frame, modified sequence

&lt;400&gt; 12

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&lt;210&gt; 13

&lt;211&gt; 1194

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; VP6 strain RF open reading frame, modified sequence

&lt;400&gt; 13

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&lt;210&gt; 14

&lt;211&gt; 1194

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; VP6 strain RF open reading frame, modified sequence

&lt;400&gt; 14

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acaccagcg	tagccgcgtt	atttccaaat	gcccggccat	ttgaacatca	cgcaacagta	960
ggactcacgc	ttagaattga	atctgcagtt	tgtgaatcag	tacccggcga	cgcaaggcga	1020
acaatgctag	cacaagtgcac	atctgttaga	caagaatacg	cgataccagt	tggaccagg	1080
tttccaccag	gtatgcagtt	gactgatttg	atcactaact	attcaccatc	tagagaggat	1140
aacttgcagc	gtgtatttac	agtggcttcc	attagaagca	tgcttgtcaa	atga	1194

&lt;210&gt; 15

&lt;211&gt; 1194

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; VP6 strain RF open reading frame, modified sequence

&lt;400&gt; 15

atggatgtcc	tgtactcctt	gtcaaaaact	cttaaagatg	ctagagacaa	aattgtcgaa	60
ggcacattat	actcccaagt	cagtatcta	attcaacaat	ttaatcaaat	gataattact	120
atgaatggaa	atgagttcca	aactggagga	attggtaatc	taccgattag	aaattggaat	180
tttgattttg	gattacttgg	aacaactcta	ctaaatttag	atgctaacta	cgtcgaaacg	240
gcccgcaata	caattgatta	ttttgttagat	ttttagata	atgtatgtat	ggacgaaatg	300
gttagagaat	cacaagaaaa	tggatttgca	ccacaatcag	attcacttat	aaagttatca	360
ggcattaaat	ttaaagaat	aaatttgac	cagtcatcag	aatacataga	gaactggaaat	420
ttgcaaaata	gaagacaaaag	aacgggtttt	acatttcata	aaccaaacat	tttcccttat	480
tcagcttcat	tcacgttcaa	cagatcacaa	cccgctcatg	ataacctgtat	gggtacgatg	540
tggctcaatg	cgggatcaga	aattcaggtc	gctggattcg	actactcatg	tgcaataaac	600
gccccagcta	atacgcaaca	atttgagcat	attgtacagc	ttcgaagggt	tttgactaca	660
gctacaataa	ctcttttacc	agatgcagaa	agatttagtt	ttccaagagt	gattacttca	720

gctgacggag cgactacatg gtacttcaat ccagtgattc ttagacccaaa taacgttgaa	780
atagagttc tactaaacgg gcagataata aataacctacc aagcaagatt tggaacgatc	840
atagctagaa atttgatac aatttagattg tcatttcgt tgatgagacc accaaatatg	900
acaccaggcg tagccgcgtt atttccaaat ggcgcgcat ttgaacatca cgcaacagta	960
ggactcacgc tttagaattga atctgcgtt tgtgaatcag tacttgcga cgcaagcgaa	1020
acaatgctag cacaagtgc acatgtttaga caagaatacg cgataccgt tggaccagtt	1080
tttccaccag gtatgcgtg gactgatttgc atcactaact attcaccatc tagagaggat	1140
aacttgcagc gtgtatttac agtggcttcc attagaagca tgcttgtcaa atga	1194

<210> 16  
<211> 1348  
<212> DNA  
<213> Artificial sequence

<220>  
<223> VP6 strain RF open reading frame, modified sequence,  
with signal peptide

<400> 16	
gccccggat cccaggccc aactccccga accactcagg gtcctgtgga cagtcaccc	60
agccgcctg gctccaggct cccggacgtc cctgcctcgt gctttgcct tgctctgcct	120
gcctggctt caggaggctg ggcgcgtgtat ggtgtcctg tactccctct caaaaactct	180
taaagatgtt agagacaaa ttgtcgaagg cacactgtac tcccaagtca gtgatctcat	240
tcagcgttt aatcagatga ttattactat gaatggcaat gagttccaga ctggaggcat	300
tggcaatctc cccattagaa attggaattt tgattttgga ctccttggaa caactctgct	360
caatctggat gctaactacg tcgaaaacggc ccgcaataca attgatttt ttgtcgattt	420
tgtggataat gtctgtatgg acgaaaatggt tagagaatca cagagaaatg gcattgcacc	480
acagtcagat tcacttatca agctctcagg cattaaattt aaacgcatta attttgacca	540
gtcatcagaa tacatcgaga actggaatct gcaaaaataga agacagagaa cgggattcac	600
atttcataaa ccaaacattt tcccttattc cgcttccttc acgctccagc gtcacagcc	660
cgcctcatgat aacctgtatgg gcacgatgtg gctcaatgct ggctcagaaa tccaggtcgc	720
tggattcgac tactcatgtg caatCACGC cccagctaat acgcagcgt ttgagcatat	780
tgtgcagctt agaagggtgc tcactacagc tacaatcaact cttctgccag atgcagaaag	840
attcagttt cccagagtga ttacttcagc tgacggagct actacatggt acttcatacc	900
agtgattttt agaccaata acgttggaaat tgagtttctg ctcaacggac agatcataa	960
tacttaccag gcaagattt gaaacgatcat cgctagaaat tttgatacaa tttagactgtc	1020
atttcagctc atgagaccac caaacatgac accagccgtc gctccctct ttccaaatgc	1080
tcagccattt gaaacatcaac caacagtggg actcaacgctt agaattgaat cagcagtgt	1140
tgaatcagtc cttgccgacg caagcgaaac aatgctggca caagtgacat ctgttagaca	1200
ggaatacgcc attccagttt gaccagttt tccaccagga atgcagtgaa ctgatctgat	1260
cactaactat tcaccatcta gagaggataa cctccagcgc gtgttacag tggcatccat	1320
tcgcagcatg cttgtcaaattt gagcgccgc	1348

<210> 17  
<211> 1061  
<212> DNA  
<213> Human rotavirus

<220>  
<223> G9 strain 97CM113 outer capsid protein (VP7)

<400> 17	
ggcttaaaaa gagagaattt ccgtctggct agcgttattt tccttttaat gtatggatt	60
gaatatacca caattctaac cttctgata tcaatagttt tattgaacta tatataaaaa	120
tcactaacta gtgcgtatgg cttcataattt tataatttc ttttacttat tgttattgca	180
tcacctttt taaaaacaca aaattatggaa attaatttac cgatcactgg ctccatggat	240
acagcatatg caaatttcac acagcaagaa acattttga cttcaacgct atgcttatat	300
tatcctacag aagcgtcaac tcaaattggaa gatacggaaat ggaaggatac tctgtcccaa	360
ttattcttga cttaaagggtg gccaactggaa tcagtttattt ttaaagaataa caccgatata	420

gcttcattct caattgatcc gcaactttat tggattata atgttgtact gatgaagtat	480
gattcaacgt tagagctaga tatgtctgaa ttagctgatt taattctaaa tgaatggta	540
tgttaacccaa tggatataac attatattat tattcagcaaa cagatgaagc gaataaatgg	600
atatcgatgg gacagtcttg taccataaaa gtatgtccat tgaatacgca gacttttagga	660
atagggttta ttaccacaaa tacagcgaca tttgaagagg tggctacaag tgaaaaatta	720
gtaataaccg atgttgtga tgggtgtgaac cataaaacttg atgtgactac aaataacctgt	780
acaatttagga attgttaagaa gttgggacca agagaaaatg tagcgattat acaagtcggt	840
ggctcagatg tggtagatat tacagcgat ccaactactg caccacaaac tgaacgtatg	900
atgcgagtaa attggaagaa atgggtggcaa gttttctata cagtagtaga ttatattaat	960
cagattgtgc aagtatgtc caaaaagatca cggtcattaa attcagcagc ttttactat	1020
agggtttgat atatcttata tttagaattgt atgtatgtac c	1061

&lt;210&gt; 18

&lt;211&gt; 1062

&lt;212&gt; DNA

&lt;213&gt; Human rotavirus

&lt;220&gt;

&lt;223&gt; G9 strain 02-22 capsid protein VP7 gene

&lt;400&gt; 18

ggctttaaaa gagagaattt ccgtctggct agcggttagc tccttttaat gtatggatt	60
gaatatacca caattctaacc ctttctgata tcaatagttt tattgaacta tatattaaaa	120
tcactaacta gtgcgatggc ctttataattt tataattttc ttttacttat tggatttttgc	180
tcatctttt taaaacaca aaattatggc attaattttc cgatcactgg ctccatggat	240
acagcatatg caaattcatc acagcaagaa acatttttgc cttcaacgct atgcttat	300
tatcctacag aagcatcaac tcaaattggc gatacggat ggaaggatac tctgtcccaa	360
ttattcttgc ctaaagggtg gccaaactggc tcagtttattt taaaagaata cactgatatc	420
gcttcattct caattgatcc acaactttat tggattata atgttgtact gatgaagtat	480
gattcaacgt tagagctaga tatgtctgaa ttagctgatt taattctaaa tgaatggta	540
tgttaacccaa tggatataac attatattat tattcagcaaa cagatgaagc gaataaatgg	600
atatcgatgg gacagtcttg taccataaaa gtatgtccat tgaatacgca gacttttagga	660
atagggttta ttaccacaaa tacagcgaca tttgaagagg tggctacaag tgaaaaatta	720
gtaataaccg atgttgtga tgggtgtgaac cataaaacttg atgtgactac aaataacctgt	780
acaatttagga attgttaagaa gttgggacca agagaaaatg tagcgattat acaagtcggt	840
ggctcagatg tggtagatat tacagcgat ccaactactg caccacaaac tgaacgtatg	900
atgcgagtaa attggaagaa atgggtggcaa gttttctata cagtagtaga ttatattaat	960
cagattgtgc aagtatgtc caaaaagatca cggtcattaa attcagcagc ttttactat	1020
agggtttgat atatcttata tttagaattgt atgtatgtac ca	1062

&lt;210&gt; 19

&lt;211&gt; 1062

&lt;212&gt; DNA

&lt;213&gt; Human rotavirus

&lt;220&gt;

<223> G3 strain MaCH09004 outer capsid protein (VP7) gene,  
complete cds

&lt;400&gt; 19

ggctttaaaa gagagaattt ccgtctggct agcggttagc tccttttaat gtatggatt	60
gaatatacca cagtttaac ctttttgcata tcagtttat tggatttttgc cgtactcaaa	120
tccttaacta gaataatggc ctttattttt tacagatttc ttttattttt agtttat	180
tcaccactcc ttaatgcaca aaattatggc ataaatcttc cgattactgg ctcaatggac	240
acaccatata cgaactcaac gcgagaggaa gtattcctaa cttcgacttt atgtttgtat	300
tacccaaactg aagcagcaac agaaataat gataattcat ggaaggatac actttctcag	360
ctatttttaa tcaaaggatg gccaaacagga tctatttttattt taaaagatata tactgatatt	420
gcctcgcccc cagtcgatcc acaactgtat tggattata atttggattt aatgaaatat	480
gacgctacac tgcaactggc catgtccgaa cttcgactttt tggatgtgttta	540

tgttaatccta tggatattac tttgttattat tatcaacaaa ctgatgaggc aaaaaaayy	500
atttcaatgg gatcatctt tactataaag gtatgtccac taaatacgca aacatttagga	660
attgggtgtc taacaactga tacaaacacg tttgaagaag ttgcacacgc tgaaaaatta	720
gtgattactg acgttgtaga tggagtcaat cataaattga acgtgacaac aaacacttgt	780
acgattcgaa attgtaagaa attaggacca agggaaaacg tagcagttat acaggttagt	840
ggccccagatg tgcttgacat aacagctgat ccaacgacaa tgccacaaac agaaagaatg	900
atgcgagtga attggaagaa atggtggcaa gtgtttata caatagttga ctacgtgaat	960
caaattgtgc aagcaatgtc caaaagatcg agatcattaa attctgctgc attttactac	1020
agagtataga tatacgtag attagaattt tatgtatgtga cc	1062

<210> 20  
<211> 981  
<212> DNA  
<213> Human rotavirus  
  
<220>  
<223> G12 VP7 gene for capsid protein, complete cds

<400> 20	
atgttatggta ttgaatatac cacaattcta accttttga tatcaattgt tctattaaat	60
tatataattaa aatcaataac taatataatg gactttatca tatacggtt tttactaata	120
gttgggtgtca tgctgccatt tattaaagct caaaattatg gaataaatct tccaataaca	180
ggttctatgg ataccgcata tacaaactcc acacaacaag agaattttat gacttccact	240
ttatgcttat attatccaag ttcatcgactg actgaaataa ctgaccggaa ttggacgaac	300
acactgtcac aacttttcat gactaaagga tggccacaa attccgtcta cttcaagagt	360
tatgctgata tagcgtcctt ctctgttagat ccgcagttat attgtgatta caatattgtg	420
tttagtacagt accaaaattc attagcgttg gatgtctcag aacttgcgtt ttaatttt	480
aatgaatggt tatgtaatcc gatgacgtt acgttgtact attatcaaca aacagatgaa	540
gcgaataaaat ggatatcaat gggagaatca tgtacggta aagtatgtcc cttaaatacg	600
caaactttag gaattggatg tacaacaacc gacgtcacaa catttgaaga gtagcaaac	660
gccccaaaaat tagataataac tgacgtcggt gatggagtca atcacaagat taatattaca	720
atgaatacat gtactatacg gaattgcaaa aagttaggac cgagggaaa tgtagcaatt	780
atacaagtag gtgggtctga cgtcatagac ataacagcag atccaacaaac gatcccacaa	840
actgaaagaa tcatgacat aaattggaaa aaatggtggc aggtgtttt taccgttagt	900
gattacataa atcaaataatgt tcaggtatgt tccaaacgtat caagatcact aaattcagct	960
gccttttact acagaattta g	981

<210> 21  
<211> 1062  
<212> DNA  
<213> Human rotavirus  
  
<220>  
<223> G3 strain MaCH09404 outer capsid protein (VP7) gene,  
complete cds.

<400> 21	
ggctttaaaa gagagaattt ccgtctggct agcggttagc tcctttaat gtatggatt	60
gaatatacca cagtttaac cttttgata tcagttatat ttttgaatta cgtactcaaa	120
tccttaacta gaataatgga ctttattatt tacagatttc tttttaattt agttatatta	180
tcaccactcc ttaatgcaca aaattatgga ataaatcttc cgattactgg ctcaatggac	240
acaccatata cgaactcaac gcgagaggaa gtattcctaa ctgcacttt atgtttgtat	300
tacccaactg aagcagcaac agaataaaat gataattcat ggaaggatac actttctcag	360
ctatTTTAA tcaaaggatg gccaacagga tctattttt ttaaagatta tactgtatatt	420
gcctcgTTT cagtcgatcc acaactgtat tgtgattata atttggatt aatgaaatat	480
gacgctacac tgcaactgga catgtccgaa ctagcagatt tgttactaa tgagtggta	540
tgttaatccta tggatattac tttgttattat tatcaacaaa ctgatgaggc aaataatgg	600
atttcaatgg gatcatctt tactataaag gtatgtccac taaatacgca aacatttagga	660

attgggtgtc taacaactga tacaaacacg tttgaagaag ttgcaacacgc tgaaaaaat 720  
gtgattactg acgtttaga tggagtcaat cataaattga acgtgacaac aaacacttgt 780  
acgattagaa attgttaagaa attagacca agggaaaacg tagcagttat acaggttaggt 840  
ggcccagatg tgcttgacat aacagctgat ccaacgacaa tgccacaaac agaaagaatg 900  
atgcgagtga attggaagaa atggtaggcaa gtgtttata caatagtga ctacgtgaat 960  
caaattgtgc aagcaatgtc caaaagatcg agatcattaa attctgctgc attttactac 1020  
aagtataga tatagcttag attagaattt tatgtatgtga cc 1062

&lt;210&gt; 22

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; HIV epitope

&lt;400&gt; 22

Arg Thr Pro Lys Ile Gln Val  
1 5

&lt;210&gt; 23

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; HIV epitope

&lt;400&gt; 23

Glu Leu Asp Lys Trp Ala  
1 5

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